

WHAT IS CLAIMED IS:

- 1 1. A method of adapting weather radar thresholds, comprising:
2 generating a location from a location sensor;
3 retrieving information representative of a weather type from a
4 database, based on the location;
5 adjusting, automatically, the threshold for a radar display based on
6 the information.
- 1 2. The method of claim 1, further comprising:
2 receiving, by the location sensor, global positioning system (GPS)
3 signals.
- 1 3. The method of claim 1, wherein the database comprises land mass
2 information.
- 1 4. The method of claim 1, wherein the database comprises ground
2 clutter targets.
- 1 5. The method of claim 1, wherein the database comprises altitude
2 based information.
- 1 6. The method of claim 1, further comprising:
2 applying a threshold control law when adjusting the threshold.
- 1 7. The method of claim 1, further comprising:
2 generating an assessment of whether a location is one of at least
3 three types.
- 1 8. The method of claim 7, wherein the three types comprise, maritime,
2 continental, and transitional.

- 1 9. The method of claim 1, further comprising:
2 Generating a weighting factor based on the location, the weighting
3 factor being representative of whether the location is primarily maritime or
4 primarily continental.
- 1 10. A method of adapting weather radar thresholds, comprising:
2 determining the type of weather, based on location of the radar;
3 and
4 adjusting, automatically, the weather radar display to display
5 weather hazards, based on the type of weather.
- 1 11. The method of claim 10, further comprising:
2 receiving, by a global positioning system receiver, global
3 positioning system (GPS) signals, which are converted to location signals.
- 1 12. The method of claim 10, wherein the type accounts for land mass
2 information.
- 1 13. The method of claim 10, wherein the type accounts for ground
2 clutter targets.
- 1 14. The method of claim 10, wherein the type accounts for altitude
2 based information.
- 1 15. The method of claim 10, further comprising:
2 applying a threshold control law when adjusting the weather radar
3 display.
- 1 16. The method of claim 10, further comprising:
2 generating an assessment of whether a location is one of at least
3 three types.

1 17. The method of claim 16, wherein the three types comprise,
2 maritime, continental, and transitional.

1 18. An airborne weather radar carried on an aircraft, comprising:
2 a radar antenna system carried on the aircraft;
3 a location determining system, configured to provide location of
4 information of the aircraft;
5 a database comprising weather type information relating to location;
6 and
7 a processing system accessing the database and adjusting the
8 weather radar display thresholds based on weather type information from the
9 database that is based on the location of the aircraft.

1 19. The airborne weather radar of claim 18, wherein the location
2 determining system includes a global positioning system receiver.

1 20. The airborne weather radar of claim 18, wherein the processing
2 system controls colors displayed on the weather radar display.

1 21. The airborne weather radar of claim 18, wherein the weather type
2 information is based on land mass information.

1 22. A method of adapting weather radar tilt angle, the weather radar being
2 on-board an aircraft, comprising:
3 determining a range at which the weather is to be detected;
4 determining automatically, a radar tilt angle, the radar tilt angle
5 being based on the range.

1 23. The method of claim 22, further comprising:
2 determining the location of the aircraft.

- 1 24. The method of claim 23, further comprising:
- 2 retrieving from a database, information representative of ground
- 3 letter, based on the location.